

Purchase Order Receipt Listing

Friday, July 25, 2014 7:39:08 AM

All amounts are calculated in domestic currency.

All Vendors PO ID PO24969 Receipt Dates from 7/25/2014 to 7/25/2014 All Line Item Types

All Item ID/GL/WOs All Rec. Employees All Currencies

Grouped by Vendor ID

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
Vendor ID \ Vendor Name			VC-MET001	Metaux Castle							
PO24969	1		M174PH- H900R0.500	f	7/21/2014	7/25/2014	120.0000	\$7.61	0.0000	0	\$912.75
CAD	No		17-4SS H900 ROUND BAR 0.500 m129892	f	120.0000	DES102		\$912.75	0.0000	0	
	2		M174PH- H900R0.625	f	7/21/2014	7/25/2014	36.0000	\$11.59	0.0000	0	\$417.24
	No		17-4 SS H900 ROUND BAR 0.625 m129892	f	36.0000	DES102		\$417.24	0.0000	0	
	3		M174PH- H900R0.750	f	7/21/2014	7/25/2014	183.1250	\$9.75	0.0000	0	\$1,784.90
	No		17-4 SS H900 ROUND BAR 0.750 m129892	f	180.0000	DES102		\$1,784.90	0.0000	0	
	4		M174PH- H900R1.500	f	7/21/2014	7/25/2014	128.9583	\$20.56	0.0000	0	\$2,652.02
	No		17-4SS H900 ROUND BAR 1.500 m129892	f	120.0000	DES102		\$2,652.02	0.0000	0	
	5		M174PH- H900R2.000	f	7/21/2014	7/25/2014	25.7083	\$35.88	0.0000	0	\$922.32
	No		17-4SS H900 ROUND BAR 2.000 m129892	f	24.0000	DES102		\$922.32	0.0000	0	
	6		71401-45		7/21/2014	7/25/2014	1.0000	\$0.00	0.0000	0	\$0.00
	No		PROCUREMENT QUALITY CLAUSES m129892		1.0000	DES102		\$0.00	0.0000	0	

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MIRB Qty/ MIRB Reject Qty	Book Amt
Total Received Quantity:											
Total Qty to Inspect (PO U/M):											
Total Reject Quantity:											
Total Receipt Value:											
Total Balance Due Quantity:											
494.7916											
0.0000											
0.0000											
\$6,689.24											
0.0000											

**Castle Metals®**

A. M. Castle & Co.

**BORDEREAU DE MARCHANDISES
CERTIFICAT DE CONFORMITE**

Page 1 of 2

No de Formulaire d'Emballage / Shipment No: 2251904

Expédié de / Ship From: MONTREAL - CASTLE METALS 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2	Vendu à / Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	Expédié à / Ship To: METCOR INC. 560 BOUL. ARTHUR-SAUVE ARTHUR-SAUVE SAINT-EUSTACHE, QC J7R 5A8 CAN	Livré à / Deliver To: METCOR INC. 560 BOUL. ARTHUR-SAUVE SAINT-EUSTACHE, QC J7R 5A8 CA
Date d'expédition / Date Shipped 22-JUL-2014	F.O.B. ORIGIN	Modalités de transport / Freight Terms Prepaid	Transporteur / Carrier LOCAL_FLEET
			No du Bon de connaissance / BOL No 2251904-3

Détails d'expédition / Shipment Details	Destination finale / Final Destination Branch - MON
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N° de commande / Order No 3446712	N° de ligne / Line No 5	N° d'article / Item No 14981.MO	Description 2.0000.RD.17CR-4NI:STAINLESS.CF.SOL TR.COND A-132.0000-156.0000 CUT TO 154.25 IN () - CUT IN 4TH'S SPECIFICATIONS: AMS 5643
N° de bon de commande / Purchase Order No 24969	Nbre de pièces / Part Number	Qté commandée / Ordered Qty 2.00 PCS	Qté Facturée / Invoice Qty 25.7083 FT

Détails / Details	ATTN MONTREAL: SHIP TO METCOR AMS 5643 ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@artaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS		
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N° de livraison / Delivery No :	Usine / Mill	No de coulée / Heat Number	Code mec / Mech Id	Qty or PCS	Largeur / Width (IN)	Longueur / Length (IN)	Qté expédiée / Shipped Qty(LBS)
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Castle Metals®

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BORDEREAU DE MARCHANDISES
CERTIFICAT DE CONFORMITE

Page 2 of 2

119720595	 11 2 5 7 6 3 5 11		2			274.5650
<p>Ces marchandises/technologies sont sujettes aux règlements de l'Export Administration et du Département d'Etat des Etats-Unis. Si elles ont été exportées, elles doivent se conformer à ces règlements. Toute modification du contrat de transport contraire aux lois des Etats-Unis est interdite.</p> <p>These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported hereunder. Diversion contrary to US Law is Prohibited.</p> <p>Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel, y compris toute spécification faisant partie de la description. Les rapports d'essai sont archivés pour fins de consultation. Toute requête concernant du matériel défectueux sera réglée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co. dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.</p> <p>We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.</p>						
Ce matériel a été reçu et inspecté par Reviewed by Authorized Castle Metals Representative			Date:		Name:	

Acciaierie Valbruna S.p.A.



CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2004) , 3.1

36100 VICENZA (Italia) - Viale della scienza, 25 z.i.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4

Cliente / Besetzer/Kunde/Klien:
VALBRUNA CANADA LTD
8724 HOLGATE CRESCENT
LST 5Z1-MILTON, ONT L5T 5Z1-CA

Produttore: **ACCIAIERIE VALBRUNA S.P.A.**
Hersteller/Hersteller/Usine producer

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYDS REGISTER

Avviso di Spedizione: D-VI12024438
Lieferungsanweisung/Lesung

Certificato nr: MEST234804/2012/ 1
Prüfung/Test/Essai

Conferma ordine nr: EII2005601
Werkzeug/Order/Contrat

Ordine nr: 208003803 Stock - Canada
Bestellnr/Order/Commande

Marchio di Fabbrica:
Zeichen des Lieferanten
Trade mark
Sole de l'usine productrice



Stato di fornitura: Hot rolled Polished COND. A Peeled
Lieferzustand/Delivery state/État de livraison

Tipo di Elaborazione: E+AOD
Erherstellungsgang/Working process/Mode d'elaboration

Punzione del Collaudatore:
Stempel des Verlässchwerständigen
Inspector's stamp/Signature de l'essayeur



Specifiche:
Anforderungen / Requirements / Exigences

3174-03 27 630 A
ASME SA564 2013 S17400 A (0)

AMS 2303 F
ASTM A564 2010 S17400 A

AMS 5643 S S17400 A

(0) SECTION II PT.A 2013 EDITION

Qualità: 630
Werkstoff/Grade/Qualité

Marca: V174
Markenbezeichnung
Designation

Tolleranza: ASYM A484-11
Toleranz/Allowance/Tolérance

Punzonatura: 630
Kennzeichnung/Marking/Marquage

Pos. nr. Pos. nr. N° de poste	Oggetto Objet/Objekt Description de produit	Dimensioni - In Abmessungen Dimensions Dimension	Lunghezza - In Länge Length Longueur	Colata Schmelze Heat Coulée	Pezzi Stückzahl Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Losnr. Lot nr.
0010	Round	2,0000	144 / 155	257635		9.134	133204350

TEST ALLO STATO DI FORNITURA

Test on delivery condition Prüfung auf lieferbarem Produkt test à l'état de fourniture Prueba sobre el material así como entregado

TEST	Proveita/Proveita Stammst./Stammst. Long diam. Stem Long Diam. Stem Long diam. Stem mm	°F	Pezzi Stückzahl Pieces Pièces	Snervamento Bruchgrenze Yield Stress Limite écoulement	Snervamento Bruchgrenze Yield Stress Limite écoulement	Resistenza Zugfestigkeit Tensile strength Résistance à traction	Allungamento Bruchdehnung Elongation Allongement	Strizione Zugverschiebung Reduction of area Striction	Resistenza Zugfestigkeit Tensile strength Résistance à traction	Durezza Härte Hardness Dureté HB
	Valori richiesti 1 Anforderungswerte Values demandées	min max								363
A										329

TEST	min	max
A Delta Ferrite		5,0
A RATINGS FREQUENCY		1,10
A RATINGS SEVERITY		1,05

OK 14/08/05

Sample cond. H900

Sample cond. H900											
Tipo Trattamento Wärmebehandlung Heat Treatment Traitement thermique	Temperatura Temperatur Temperature Température	Raffreddamento Abkühlung Cooling Refroidissement	Permanenza Haltezeit Dwell Dureté	Tipo Trattamento Wärmebehandlung Heat Treatment Traitement thermique	Temperatura Temperatur Temperature Température	Raffreddamento Abkühlung Cooling Refroidissement	Permanenza Haltezeit Dwell Dureté	Tipo Trattamento Wärmebehandlung Heat Treatment Traitement thermique	Temperatura Temperatur Temperature Température	Raffreddamento Abkühlung Cooling Refroidissement	Permanenza Haltezeit Dwell Dureté
Aging	900 °F	AIR	60								
TEST	Proveita/Proveita Stammst./Stammst. Long diam. Stem Long Diam. Stem Long diam. Stem mm	°F	Pezzi Stückzahl Pieces Pièces	Snervamento Bruchgrenze Yield Stress Limite écoulement Rp 0,2% k.s.i.	Snervamento Bruchgrenze Yield Stress Limite écoulement	Resistenza Zugfestigkeit Tensile strength Résistance à traction Rm k.s.i.	Allungamento Bruchdehnung Elongation Allongement E 4d %	Strizione Zugverschiebung Reduction of area Striction RA %	Resistenza Zugfestigkeit Tensile strength Résistance à traction Tensile Value Receptor	Durezza Härte Hardness Dureté HB	
Valori richiesti 1 Anforderungswerte Values demandées		min max		170	-	190	10	40	-	388 444	
B	12.5	68	L	182	-	199	16	52	-	429	

1) - lunghezza dell'asta, T=temperatura, C=temperatura di raffreddamento

Mechanical properties according to ASTM A370.
Delta Ferrite according to AMS 2315.

Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Colata/Heat Schmelze/Coulée	min - max 0,070	1,00	1,00	15,00 17,50	0,50	3,00 5,00	3,00 5,00	0,040	0,030	-	-	-	-	-	-
257635	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	P %	S %	Ta %					
	0,035	0,45	0,49	15,08	0,19	3,37	4,52	0,025	0,001	0,0001					

Vicenza, 12/03/14 VCO012 (Mod. MCE2)	Il collaudatore di stabilimento / der Werkssachverständige / Works inspector / L'agent d'usine M. Rizzoli	Pagina - 1 di 2
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Acciaierie Valbruna S.p.A.



CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2004) , 3.1

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4

Cliente / Besieder/Purchaser/Client
VALBRUNA CANADA LTD
8724 HOLGATE CRESCENT
L5T 5Z1-MILTON, ONT L5T 5Z1-CA

Produttore: **ACCIAIERIE VALBRUNA S.P.A.**
Hersteller/Usine producer

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER

Avviso di Spedizione: D-VII2024438
Lieferungs/Packing list/B.L.

Certificato nr: MEST234804/2012/ 1
Prüfung/Test/Essai

Conferma ordine nr: EI12006601
Werk/Our Order/Pel. nr.

Ordine nr: 208003803 Stock - Canada
Bestell/Vous ordre/Commande

Marchio di Fabbrica:
Zeichen des Werksachseur/Sign
Trade mark
Sigle de l'usine producer



Stato di fornitura: Hot rolled Polished COND. A Peeled
Lieferzustand/Delivery state/État de livraison

Tipo di Elaborazione: E+AOD
Erweiterungs/Anlage/Rog process/Mode d'élaboration

Punzone del Collaudatore:
Stempel des Werksachseur/Inspection
Inspection/ Stempel/Prüfung de l' assesseur



Colata / Pour Schmelze/Coulée	min 5°C max 0,450	0,150 0,450				
257635	Cb(Nb)% 0,282	Nb%+Ta% 0,282				

Reduction ratio > 3 : 1.

Macroetch test per ASTM E340: acceptable.

Furnace calibrated according to AMS-H-6875,A;APRIL 2006

Material solution annealed 1904F for 2 h,

air cooled to below 90F.

Material is DFARS Compliant

Sono state soddisfatte tutte le condizioni richieste
Die gestellten Anforderungen sind s. Anlage erfüllt.
The material has been furnished in accordance with the requirements
Le matériel s'est trouvé conforme aux exigences

Controllo omimescolanza: OK
Verunreinigungsprüfung: spezialanalytisch durchgeführt
Antimixing testing performed: OK
Controlle schmelzungs fäh: r.s.s

Controllo visivo e dimensionale: soddisfa le esigenze
Besichtigung und Ausmessung: ohne Beanstandung
Visual inspection and dimensional checks satisfactory
Contrôle visuel et dimensionnel: satisfaisant

Melted and manufactured in Italy No welding or weld repair Material free from Mercury contamination
We declare that the finished product is checked for radioactive contamination through Portal System when it leaves the production plant.

The Quality Management System is Certified acc. Pressure Equipment Directive [97/23/EC] Annex 1,s.4.3 by TUEV and LLOYD' S
Any act of tampering, modification, alteration, counterfeiting and/or falsification and/or any other action which modifies the contents of this test certificate shall constitute a violation of applicable civil and criminal laws. Acciaierie Valbruna shall protect its rights and interests before any competent court, authority and jurisdiction.

The supplied product conforms to requirements expressly requested by the purchaser and conforms to requirements specified by certified norms and standards. Should the product be used for more severe, critical and/ or in any case different applications than those the material is generally intended for, any different and/or supplementary requirements shall be specifically demanded, at least, upon order of the Product by the Purchaser. Acciaierie Valbruna SpA shall not be responsible for any improper use of the Products.

Vicenza, 12/03/14
VC0012
(Mod. MCE3)

Il collaudatore di stabilimento / der Werkssachverständige / Works inspector / L' agent d' usine
M. Rizzotto

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Castle Metals®

A. M. Castle & Co.

BORDEREAU DE MARCHANDISES
CERTIFICAT DE CONFORMITE

Page 1 of 2

No de Formulaire d'Emballage / Shipment No: 2251904

Expédié de / Ship From:	Vendu à / Sold To:	Expédié à / Ship To:	Livré à / Deliver To:
MONTREAL - CASTLE METALS 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2	DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	METCOR INC. 560 BOUL. ARTHUR-SAUVE SAINT-EUSTACHE, QC J7R 5A8 CAN	METCOR INC. 560 BOUL. ARTHUR-SAUVE SAINT-EUSTACHE, QC J7R 5A8 CA
Date d'expédition / Date Shipped	F.O.B.	Modalités de transport / Freight Terms	Transporteur / Carrier
22-JUL-2014	ORIGIN	Prepaid	LOCAL_FLEET
			No du Bon de connaissance / BOL No
			2251904-3

Détails d'expédition / Shipment Details				Destination finale / Final Destination Branch - MON			
N° de commande / Order No	N° de ligne / Line No	N° d'article / Item No	Description				
3446712	4	14976.MO	1.5000.RD.17CR-4N1 STAINLESS.CF.SOL TR.COND A.132.0000-156.0000 CUT TO 154.749999334 IN () - CUT IN 4TH'S SPECIFICATIONS: AMS 5643				
N° de bon de commande / Purchase Order No	Nbr de pièces / Part Number	Qté commandée / Ordered Qty		Qté Facturée / Invoice Qty			
24969		10.00 PCS		128.9583 FT			
Détails / Details							
ATTN MONTREAL: SHIP TO METCOR AMS 5643 ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S Email P/s and certs to: clavoie@artaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS							
N° de livraison / Delivery No :	Usine / Mill	No de coulée / Heat Number	Code mec / Mech Id	Qty or PCS	Largeur / Width (IN)	Longueur / Length (IN)	Qté expédiée / Shipped Qty(LBS)




Castle Metals®

A. M. Castle & Co.

BORDEREAU DE MARCHANDISES
CERTIFICAT DE CONFORMITE

Page 2 of 2

119721007		10				775.0396
<p>Ces marchandises technologiques sont sujettes aux règlements de l'Export Administration et du département d'état des États-Unis. Si elles ont été importées, elles doivent se conformer à ces règlements. Toute modification du contrat de transport contraire aux lois des États-Unis est interdite.</p> <p>These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported hereunder. Diversion contrary to US Law is Prohibited.</p> <p>Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel. Y compris toute spécification faisant partie de la description. Les rapports d'essai sont archivés pour les besoins de consultation. Toute requête concernant le matériel défectueux sera rejetée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co. dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.</p> <p>We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.</p> <p>Ce matériel a été reçu et inspecté par _____</p> <p>Reviewed by Authorized Castle Metals Representative: _____</p> <p>Date: _____ Name: _____</p>						

Acciaierie Valbruna S.p.A.



CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2004) , 3.1

36100 VICENZA (Italia) - Viale della scienza, 25 z.i.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4
Telephon number : 0039 (0) 444968211

Cliente / Destinatario / Client
VALBRUNA CANADA LTD
8724 HOLGATE CRESCENT
LST 5Z1-MILTON, ONT L5T 5Z1-CA

Produttore: **ACCIAIERIE VALBRUNA S.P.A.**
Hersteller / Manufacture

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER

Avviso di Spedizione: D-VII4012959
Lieferungs/Packing note L

Ordine nr. 401004579 Stock - Canada
Bestell-/Vorderbestellnummer

Certificato nr: MEST502475/2014/ 1
Prüfung/Teil/Essai

Conferma ordine nr: E114000438
Werkz./Our Order Ref nr

Marchio di Fabbrica:
Zeichen des Herstellers
Trade mark
Signe de l'usine productrice



Stato di fornitura: Hot rolled Polished COND. A Peeled
Lieferzustand/Delivery state/L'etat de livraison

Tipo di Elaborazione: E+AOD
Erzeugnisbezeichnung/Manufacturing process/Mode de fabrication

Punzone del Collaudatore:
Stempel des Werkstättensachverständigen
Inspection stamp/Stampon de l'Attestateur



Specifiche:
Anforderungen / Requirements / Forderungen

3174-03 28 630 A
ASME SA564 2013 S17400 A (0)

AMS 2303 F.
ASTM A564 2010 S17400 A

(0) SECTION II PT.A 2013 EDITION

Qualità: 630
Werkstoff/Grade/Qualité

Marca: V174
Marque/Markierung
Marque/Markierung

Tolleranza: ASTM A484-13a TABLE 7
Toleranz / Allowance / Tolerance

Punzonatura: 630
Reinzeichnung/Markung/Markage

Pos. nr. Pos. nr. Pos. nr. No. de position	Oggetto Gegenstand Product description Désign. du produit	Dimensioni - In Abmessungen Dimensions Dimensions	Lunghezza - In Länge Length Longueur	Colata Schmelze Heat Caille	Pezzi Stückzahl Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Lot nr. Lot nr. Lot nr.
0100	Round	1,5000	144 / 155	263072	34	2.597	324204440

TEST ALLO STATO DI FORNITURA

Test on delivery condition Prüfung auf Lieferbereitem Produkt Test à l'état de livraison Prueba sobre el material así como entregado

TEST	Provetta/probe Sonnenst. / Probe Long. diam. Ø mm Round diam. Ø mm Long. diam. Ø mm	° F	Posiz. Sagitt. Position L'etat	Snervamento Biegeversuch Yield Stress L'etat	Snervamento Biegeversuch Yield Stress L'etat	Resistenza Zugversuch Tensile strength Résistance à traction	Allungamento Bruchversuch Elongation Allongement	Strizione Zugversuch Reduction of area Striction	Resilienza Kerbschlagversuch Impact Value Resilience	Durezza Härte Hardness Dureté HB
Valori richiesti 1 Anforderungen/Bedingungen Valeurs requises	min max									363
A	68	L								351

TEST	min	max
A HRc		38,0

TEST	min	max
A Delta Ferrite		5,0
A RATINGS FREQUENCY		1,10
A RATINGS SEVERITY		1,05

Sample cond. H900

Tipo Trattamento Wärmebehandlung Heat Treatment Traitement Thermique	Temperatura Temperatur Temperature	Raffreddamento Abkühlung Cooling Refroidissement	Permanenza Haltezeit Retention Maintien	Tipo Trattamento Wärmebehandlung Heat Treatment Traitement Thermique	Temperatura Temperatur Temperature	Raffreddamento Abkühlung Cooling Refroidissement	Permanenza Haltezeit Retention Maintien	Tipo Trattamento Wärmebehandlung Heat Treatment Traitement Thermique	Temperatura Temperatur Temperature	Raffreddamento Abkühlung Cooling Refroidissement	Permanenza Haltezeit Retention Maintien
Aging	900 °F	AIR	60 "								

TEST	Provetta/probe Sonnenst. / Probe Long. diam. Ø mm Round diam. Ø mm Long. diam. Ø mm	° F	Posiz. Sagitt. Position L'etat	Snervamento Biegeversuch Yield Stress Rp 0,2% k.s.l.	Snervamento Biegeversuch Yield Stress L'etat	Resistenza Zugversuch Tensile strength Rm k.s.l.	Allungamento Bruchversuch Elongation Allongement	Strizione Zugversuch Reduction of area Striction	Resilienza Kerbschlagversuch Impact Value Resilience	Durezza Härte Hardness Dureté HB
Valori richiesti 1 Anforderungen/Bedingungen Valeurs requises	min max			170	-	190	10	40	-	388
B	12,5	68	L	181		200	15	51		432

1) L=longitudinale/long., T=trasversale/trav., Q=Transversale/transversal

Mechanical properties according to ASTM A370.
Delta Ferrite according to AMS 2315.

Vicenza, 16/05/14 VCC005 (Mod. MCE2)	Il collaudatore di stabilimento / der Werkstättensachverständige / Works inspector / L'agent d'usine M. Rizzotto	Pagina - 1 di 2
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Acciaierie Valbruna S.p.A.



CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2004) , 3.1

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4
Telephon number : 0039 (0) 444968211

Cliente / Besteller/Kunde/Klient
VALBRUNA CANADA LTD
8724 HOLTGATE CRESCENT
LST 5Z1-MILTON, ONT L5T 5Z1-CA

Produttore: **ACCIAIERIE VALBRUNA S.P.A.**
Lieferant/Hersteller/Produkteur

Stato di fornitura: Hot rolled Polished COND. A Pooled
Lieferzustand/Delivery state/Etat de livraison

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER

Avviso di Spedizione: D-VI14012969
Lieferanweisung/Packing list

Ordine nr.: 401004579 Stock - Canada
Bestell-/Vorder-/Commande

Tipo di Elaborazione: E+AOD
Erstellungsvorgang/Working process/Mode d'elaboration

Certificato nr: MEST502475/2014/ 1
Prüfung/Test/Essai

Conferma ordine nr: EN14000438
Werkz./Order/Ref. nr.

Marchio di Fabbrica:
Zeichen des Unternehmens
Trade mark
Logo de l'usine/produit



Punzone del Collaudatore:
Stempel des Werksachverständigen
Inspector's stamp/Person de l'essai



Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Colata / Heat Schmelze/Cast	min - max 0,070	1,00	1,00	15,00 17,50	0,50	3,00 5,00	3,00 5,00	0,040	0,030	-	-	-	-	-	-
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	P %	S %	Ta %					
263072	0,043	0,38	0,40	15,00	0,16	3,29	4,52	0,024	0,001	0,0027					

Colata / Heat Schmelze/Cast	min 5°C max 0,450	0,150 0,450	-	-	-	-	-	-	-	-
	Cb(Nb)%	Nb%+Ta%								
263072	0,265	0,268								

Reduction ratio > 3 : 1.

Macroetch test per ASTM E340: acceptable.

Furnace calibrated according to AMS-H-6875.A; APRIL 2006

Material solution annealed 1904F for 1h,

air cooled to below 90F.

Material is DFARS Compliant

Sono state soddisfatte tutte le condizioni richieste
Die gestellten Anforderungen sind lt. Anlage erfüllt
The material has been furnished in accordance with the requirements
Le matériel a été fourni conforme aux exigences

Controllo antimescolanza: OK
Verwechslungsprüfung: spezialanalytisch durchgeführt
Assessing testing performed: OK
Contrôle de mélange fait: o.k.

Controllo visivo e dimensionale: soddisfa le esigenze
Besichtigung und Ausmessung: ohne Beanstandung
Visual inspection and dimensional checks satisfactory
Contrôle visuel et dimension: satisfaisant

Melted and manufactured in Italy No welding or weld repair Material free from Mercury contamination

We declare that the finished product is checked for radioactive contamination through Portal System when it leaves the production plant.

The Quality Management System is Certified acc. Pressure Equipment Directive (97/23/EC) Annex 1, s. 4.3 by TUEV and LLOYD'S

Any act of tampering, modification, alteration, counterfeiting and/or falsification and/or any other action which modifies the contents of this test certificate shall constitute a violation of applicable civil and criminal laws. Acciaierie Valbruna shall protect its rights and interests before any competent court, authority and jurisdiction.

The supplied product conforms to requirements expressly requested by the purchaser and conforms to requirements specified by certified norms and standards. Should the product be used for more severe, critical and/or in any case different applications than those the material is generally intended for, any different and/or supplementary requirements shall be specifically demanded, at least, upon order of the Product by the Purchaser. Acciaierie Valbruna SpA shall not be responsible for any improper use of the Products.

Vicenza, 16/05/14

VCD008
(Mod. MOC2)

Il collaudatore di stabilimento / der Werkssachverständiger / Works inspector / L'agent d'usine

M. Rizzotto

Pagina - 2 di 2



Castle Metals®

A. M. Castle & Co.

BORDEREAU DE MARCHANDISES
CERTIFICAT DE CONFORMITE

Page 1 of 2

No de Formulaire d'Emballage / Shipment No: 2251904

Expédié de / Ship From:		Vendu à / Sold To:		Expédié à / Ship To:		Livré à / Deliver To:	
MONTREAL - CASTLE METALS 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		METCOR INC. 560 BOUL. ARTHUR-SAUVE SAINT-EUSTACHE, QC J7R 5A8 CAN		METCOR INC. 560 BOUL. ARTHUR-SAUVE SAINT-EUSTACHE, QC J7R 5A8 CA	
Date d'expédition / Date Shipped	F.O.B.	Modalités de transport / Freight Terms		Transporteur / Carrier		No du Bon de connaissance / BOL No	
22-JUL-2014	ORIGIN	Prepaid		LOCAL_FLEET		2251904-3	

Détails d'expédition / Shipment Details								Destination finale / Final Destination Branch - MON							
N° de commande / Order No		N° de ligne / Line No		N° d'article / Item No		Description									
3446712		3		14966.MO		0.7500.RD.17CR-4NI,STAINLESS.CF.SOL TR.COND A.132.0000-156.0000 CUT TO 146.5 IN () - CUT IN 4TH'S SPECIFICATIONS: AMS 5643									
N° de bon de commande / Purchase Order No		N° de pièces / Part Number		Qté commandée / Ordered Qty		Qté facturée / Invoice Qty									
24969				15.00 PCS		183.1250 FT									
Détails / Details								ATTN MONTREAL: SHIP TO METCOR AMS 5643							
ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clayvie@artaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS															
N° de livraison / Delivery No :		Usine / Mill		No de coulée / Heat Number		Code mec / Mech Id		Qty or PCS		Largeur / Width (IN)		Longueur / Length (IN)		Qté expédiée / Shipped Qty(LBS)	

sep/14




Castle Metals®

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BORDEREAU DE MARCHANDISES
CERTIFICAT DE CONFORMITE

Page 2 of 2

119720455	 2 6 1 9 9 2		15			274.6875
<p>Ces marchandises/technologies sont soumise/s aux règlements de l'Export Administration et du département d'état des Etats-Unis. Si elles ont été/sont exportées, elles doivent se conformer à ces règlements. Toute modification du contrat de transport contraire aux lois des Etats-Unis est interdite.</p> <p>These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, will/are exported hereunder. Diversion contrary to US Law is Prohibited.</p> <p>Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel, y compris toute spécification faisant partie de la description. Les rapports d'essai sont archivés pour fins de consultation. Toute requête concernant du matériel défectueux sera réglée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co. dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.</p> <p>We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A. M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.</p>						
Ce matériel a été reçu et inspecté par		Date:		Name		
Reviewed by Authorized Castle Metals Representative						

Acciaierie Valbruna S.p.A.



CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2004) , 3.1

36100 VICENZA (Italia) - Viale della scienza, 25 z.i.
39100 BOLZANO (Italia) - Via A. Volta, 4
Telephone number : 0039 (0) 444968211

Cliente / Besondere Purchaser/Cliet
VALBRUNA CANADA LTD
8724 HOLGATE CRESCENT
L5T 5Z1 MILTON, ONT L5T 5Z1 CA

Produttore: ACCIAIERIE VALBRUNA S.P.A.
Hersteller/Produktionsunternehmen

Avviso di Spedizione: D-VI14012970
Lieferungsanweisung L

Ordine nr. 401004580 Stock - Canada
Bestellungsnummer/Bestellungsnummer

Certificato nr: MEST502476/2014/ 1
Prüfung/Prüfung

Conferma ordine nr: E114000439
Werk/Dur Order Ref nr

Marchio di Fabbrica:
Zeichen des Unternehmens
Trade mark
Schrift der Fabrik



Stato di fornitura: Hot rolled - COND. A Peeled/Polished
Lieferzustand/Delivery status/Status de livraison

Tipo di Elaborazione: E+A00
Erschließungsart/Art der Bearbeitung

Punzone del Collaudatore
Stempel des Werkstoffversuchsanstalt
Inspektionsschein/Prüfungsschein



Specifiche:
Abmessungen / Abmessungen / Abmessungen

3174-03 28 630 A
ASME SA564 2013 S17400 A (0)

AMS 2303 F
ASTM A564 2010 S17400 A

AMS 5643-T S17400 A

(0) SECTION II PT. A 2013 EDITION

Qualità 630
Werkstoff/Qualitätsstufe

Marca: V174

Tolleranza: ASTM A484-13a TABLE 7
Toleranz / Abweichung/Toleranz

Punzonatura: 630
Kannzeichnung/Markierung

Pos. nr. Pos. nr. Nr. der Pos.	Objetto Object Objekt	Dimensioni - In Abmessungen Dimensionen	Lunghezza In Länge Longueur	Colata Schmelze Melt Coulée	Pozzi Stocher Puits	Peso - LB Gewicht Weight Poids	Lotto nr. Lotnr. Lot nr.
0010	Round	0,7500	146 / 146	261992		1.618	316304890

TEST ALLO STATO DI FORNITURA

Test on delivery condition Prüfung auf Lieferbedingung prod./At Test a l'état de livraison Prueba sobre el material así como entregado

TEST	Proveita / mesche Longueur Longueur Longueur	°F	Pos. 1 Saggio Saggio Saggio	Snervimento Traction Traction Traction	Snervimento Traction Traction Traction	Resistenza Tension Tension Tension	Allungamento Elongation Elongation Elongation	Strizione Reduction Reduction Reduction	Resistenza Tension Tension Tension	Durezza Hardness Hardness Hardness
	mm									HB
Valori richiesti / Anforderungen/Requisitos Values dimensionales		min max								363
A										352

TEST		min	max	
A	Delta Ferrite		5,0	1,0 %
A	RATINGS FREQUENCY		1,10	0
A	RATINGS SEVERITY		1,05	0

Sample cond. H900

Tipo Trattamento	Temperatura	Raffreddamento	Permanenza	Tipo Trattamento	Temperatura	Raffreddamento	Permanenza	Tipo Trattamento	Temperatura	Raffreddamento	Permanenza
Heat Treatment Temperatura Temperatura Temperatura	Temperature Temperature Temperature	Cooling Cooling Cooling	Soak Soak Soak	Heat Treatment Temperatura Temperatura Temperatura	Temperature Temperature Temperature	Cooling Cooling Cooling	Soak Soak Soak	Heat Treatment Temperatura Temperatura Temperatura	Temperature Temperature Temperature	Cooling Cooling Cooling	Soak Soak Soak
Aging	900 °F	Air	60								

TEST	Proveita / mesche Longueur Longueur Longueur	°F	Pos. 1 Saggio Saggio Saggio	Snervimento Traction Traction Traction	Snervimento Traction Traction Traction	Resistenza Tension Tension Tension	Allungamento Elongation Elongation Elongation	Strizione Reduction Reduction Reduction	Resistenza Tension Tension Tension	Durezza Hardness Hardness Hardness
	mm			Rp 0,2 % k s i		Rm k s i	E 4d %	RA %		HB
Valori richiesti / Anforderungen/Requisitos Values dimensionales		min max		170		190	10	40		388 444
B	12,5	68	L	182		205	18	51		427

1: Lunghezza totale, T: spessore, D: spessore, D: spessore

Mechanical properties according to ASTM A370.
Delta Ferrite according to AMS 2315.

Analisi chimica

Chemical Analysis/Chemical Analysis/Chemical Analysis

Chemische Auswerttafel/Chemical Analysis sheet																				
Colata / melt Schmelze/Melt	min max	0,070	1,00	1,00	15,00 17,50	0,50	3,00 5,00	3,00 5,00	0,040	0,030										
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	P %	S %	Ta %										
261992	0,039	0,40	0,52	15,08	0,15	3,44	4,72	0,023	0,001	0,0001										

Vicenza, 11/04/14

VCU000
(Ass. NCEI)

Il collaudatore di stabilimento / der Werkstoffverständiger / Works inspector / L agent d'usine

M. Rizzotto

Pagina - 1 di 2

Acciaierie Valbruna S.p.A.



CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2004) , 3.1

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
Slab 39100 BOLZANO (Italia) - Via A. Volta, 4
Telephone number : 0039 (0) 444968211

Cliente / Buyer/Purchaser/Cient
VALBRUNA CANADA LTD
8724 HOLTGATE CRESCENT
L5T 5Z1-MILTON, ONT L5T 5Z1-CA

Produttore, ACCIAIERIE VALBRUNA S.P.A.
Hersteller/Hersteller/Usine producer

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER

Avviso di Spedizione: D-VI14012970
Lieferungs-Packing list

Ordine nr: 401004580 Stock - Canada
Bestell-/Your order/Commande

Certificato nr: MEST502476/2014/ 1
Prüfung Teil 116

Conferma ordine nr: EN14000439
Werkzettel Order/Nr

Marchio di Fabbrica:
Zeichen des Unternehmens
Trade mark
Signe de l'usine productrice



Stato di lornitura: Hot rolled - COND. A Peeled/Polished
Lieferzustand/Delivery state/Etat de livraison

Tipo di Elaborazione: E+AOD
Erweiterungs-/Wärming process/Mode d'elaboration

Punzone del Collaudatore:
Stempel des Werkstoffverständigen
Inspector's stamp/Portion de l'inspecteur



Colata / Heat Formale / Cradle	min 5°C max 0.450	0.150 0.450					
	Cb(Nb)%	Nb%+Ta%					
261992	0.295	0.295					

Reduction ratio > 3 1.

Annealing temperature 1904 deg. F for 4 H. air
cool to below 90F.

Macroetch test per ASTM E340: acceptable.

Furnace calibrated according to AMS-H-6875;A;APRIL 2006

Material is DFARS Compliant

Sono state soddisfatte tutte le condizioni richieste
Die gestellten Anforderungen sind in Anbetracht erfüllt
The material has been furnished in accordance with the requirements
Le materiel a été livré à conforme aux exigences

Controllo antimiscelanza: OK
Vermischungsprüfung: durchsichtig durchgeführt
Antimixing testing performed: OK
Controlle antemélange: satisfaisant

Controllo visivo e dimensionale soddisfa le esigenze
Bausichtprüfung und Ausmessung ohne Beanstandung
Visual inspection and dimensional checks satisfactory
Contrôle visuel et dimensionnel satisfaisant

Melted and manufactured in Italy No welding or weld repair Material free from Mercury contamination
We declare that the finished product is checked for radioactive contamination through Portal System when it leaves the production plant.

The Quality Management System is Certified acc. Pressure Equipment Directive (97/23/EC) Annex 1, s. 4.3 by TÜV and LLOYD'S
Any act of tampering, modification, alteration, counterfeiting and/or falsification and/or any other action which modifies the contents of this test certificate shall constitute a violation of applicable civil and criminal laws. Acciaierie Valbruna shall protect its rights and interests before any competent court, authority and jurisdiction.
The supplied product conforms to requirements expressly requested by the purchaser and conforms to requirements specified by certified norms and standards. Should the product be used for more severe, critical and/or in any case different applications than those the material is generally intended for, any different and/or supplementary requirements shall be specifically demanded, at least, upon order of the Product by the Purchaser. Acciaierie Valbruna SpA shall not be responsible for any improper use of the Products.

Vicenza, 11/04/14

VCC000
(Mod. MCE01)

Il collaudatore di stabilimento / der Werkstoffverständiger / Work inspector / L'agent d'usine

M. Rizzotto

Pagina - 2 di 2



Castle Metals®

A. M. Castle & Co.

BORDEREAU DE MARCHANDISES
CERTIFICAT DE CONFORMITE

Page 1 of 2

No de Formulaire d'Emballage / Shipment No: 2251904

Expédié de / Ship From: MONTREAL - CASTLE METALS 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Vendu à / Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Expédié à / Ship To: METCOR INC. 560 BOUL. ARTHUR-SAUVE SAINT-EUSTACHE, QC J7R 5A8 CAN		Livré à / Deliver To: METCOR INC. 560 BOUL. ARTHUR-SAUVE SAINT-EUSTACHE, QC J7R 5A8 CA			
Date d'expédition / Date Shipped 22-JUL-2014		F.O.B. ORIGIN		Modalités de transport / Freight Terms Prepaid		Transporteur / Carrier LOCAL_FLEET		No du Bon de connaissance / BOL No 2251904-3	

Détails d'expédition / Shipment Details										Destination finale / Final Destination Branch - MON									
N° de commande / Order No 3446712		N° de ligne / Line No 2		N° d'article / Item No 14963.MO		Description 0.6250.RD.17CR-4N1, STAINLESS.CF.SOL TR.COND A.132.0000-156.0000 CUT TO 144 IN () - CUT IN 4THS SPECIFICATIONS: AMS 5643													
N° de bon de commande / Purchase Order No 24969		Nbre de pièces / Part Number		Qté commandée / Ordered Qty 3.00 PCS		Qté facturée / Invoice Qty 36.0000 FT													
Détails / Details ATTN:MONTREAL: SHIP TO METCOR AMS 5643 ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clayoie@artaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS																			
N° de livraison / Delivery No :		Usine / Mill		No de coulée / Heat Number		Code mec / Mech Id		Qty or PCS		Largeur / Width (IN)		Longueur / Length (IN)		Qté expédiée / Shipped Qty(LBS)					

22/07/15

22/08/15

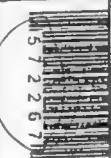


Castle Metals®

A. M. Castle & Co.

BORDEREAU DE MARCHANDISES
CERTIFICAT DE CONFORMITE

Page 2 of 2

119718334			3			37.4400				
<p>Ces marchandises/technologies sont sujettes aux règlements de l'Export Administration et du département d'état des Etats-Unis. Si elles ont été/ont exportées, elles doivent se conformer à ces règlements. Toute modification du contrat de transport contracté aux lois des Etats-Unis est interdite.</p> <p>These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, we/they are exported thereunder. Diversion contrary to US Law is Prohibited</p> <p>Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel; y compris toute spécification faisant partie de la description. Les rapports d'essai sont archivés pour fins de consultation. Toute requête concernant du matériel défectueux sera rejetée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co. dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.</p> <p>We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.</p> <p>Ce matériel a été reçu et inspecté par _____</p> <p>Reviewed by Authorized Castle Metals Representative _____</p> <table border="1" data-bbox="962 1176 997 1910"><thead><tr><th>Date</th><th>Name</th></tr></thead><tbody><tr><td> </td><td> </td></tr></tbody></table>							Date	Name		
Date	Name									

Castle Metals FP

HEAT NUMBER 572267
MECHANICAL ID _____
ITEM CODE 14963
LOT NUMBER _____
PO NUMBER 264591
RECEIPT DATE 5-27-14
SUPPLIER TAIIFJ
SPECIFICATION _____
LCS RLC
COMMENT _____
APPROVED SL

CERTIFICATE OF TESTS
CERT SERIAL# 000929581

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE



CARPENTER

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa. 19601
Tel: (610) 208-2000 (800) 338-4592

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- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
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05/22/14

CUSTOMER/BESTELLER/CLIENT

SELLER/VERKÄUFER/VEHDELR PAGE 1 OF 2

AM CASTLE & CO

CARPENTER TECHNOLOGY CORP

3400 N WOLF RD
FRANKLIN PARK IL 60131

101 WEST BERN STREET
READING, PA 19601

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./SERIE-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
264591	W41969	05/22/14	2468.000

HEAT NUMBER / SCHMELZE-NR. / N DE COULEE:

572267

UNS NUMBER S17400

PRODUCT DESCRIPTION: TYPE 17-4 SOLUTION ANNEALED COLD FINISH
----- PART NUMBER: IAC 14963

SPECIFICATION: CASTLE 3174-216 REV 6 (10/21/13)

AMS 2303 REV F (08/ /10)
AMS 5643 REV T (12/ /13) (UNS S17400) (AISI 630)
ASTM-A564-13
ASME-SA564 2013 EDITION

SIZE 0.625000 IN. (15.88 MM) RD BAR

PRIMARY HEAT CHEMISTRY(WT%): (TEST METHOD IS SHOWN IN PARENTHESIS)

C (COM)	MN(XRF)	SI(XRF)	P (XRF)	S (COM)	CR(XRF)
0.02	0.80	0.40	0.022	0.020	15.32
NI(XRF)	MO(XRF)	CU(XRF)	N (FUS)	CB(XRF)	TA(XRF)
4.23	0.12	3.64	0.034	0.24	LT .02

CB+TA
0.26

THIS HEAT MELTED BY THE ELECTRIC ARC/AOD PROCESSES
NO WELD REPAIR.

MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM AND ALPHA SOURCE
CONTAMINATION.

MILL HEAT TREATMENT:

TYPE SOL ANL
TEMP 1900F (1038C)
TIME (BATCH FURNACE) 80.00 MINUTES
QUENCH WATER

DISCS MACROETCHED AND APPROVED

HARDNESS AS SHIPPED, HRC - 29 (MIDRADIUS)

MAGNETIC PARTICLE: FREQUENCY = 0 / SEVERITY = 0

MICROSTRUCTURE - FERRITE 2.00%

CAPABILITY

900 F(482 C), 01 HR AIR COOL

HARDNESS , HRC - 45 (MIDRADIUS)

CONTINUED ON NEXT PAGE

This certification is made to the customer printed on this form. Carpenter neither makes, nor assumes responsibility for, any representation or certification to other parties.
Die vorliegende Zertifizierung ist nur für den in diesem Formular genannten Kunden gültig. Carpenter übernimmt gegenüber Dritten keine Haftung für die ausgetretenen Daten oder Zertifizierungen.
Ce certificat est uniquement valable pour le client dont le nom est imprimé sur ce formulaire. Carpenter n'assume pas de responsabilité pour une certification vis-à-vis d'une tierce personne.

CERTIFICATE OF TESTS

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE

CERT SERIAL# 000929581



CARPENTER

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa. 19601
Tel: (610) 208-2000 (800) 338-4592

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- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
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05/22/14

CUSTOMER/BESTELLER/CLIENT

SELLER/VERKÄUFER/VENDEUR PAGE 2 OF 2

AM CASTLE & CO

CARPENTER TECHNOLOGY CORP

3400 N WOLF RD
FRANKLIN PARK IL 60131

101 WEST BERN STREET
READING, PA 19601

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./VERG-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
264591	W41969	05/22/14	2468.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULÉE:

CAPABILITY

900 F (482 C), 01 HR

572267

UNS NUMBER S17400

AIR COOL

(T)RANSVERSE (L)ONGITUDINAL
YIELD STRENGTH (0.20 %) KSI(MPA)
TENSILE STRENGTH, KSI(MPA)
ELONGATION IN 1.40", %
REDUCTION OF AREA, %

213.0 (1469)
214.0 (1475)
11.0
48.0

14/08/05

MATERIAL HAS BEEN MELTED AND MANUFACTURED IN THE USA WHICH IS A QUALIFYING COUNTRY TO DFARS REQUIREMENTS 252.225-7014 WITH ALTERNATE 1 FOR QUALIFYING COUNTRY 225.872.1, SUPERSEDED BY DFARS REQUIREMENTS DFARS 252.225-7008 AND 252.225-7009.

THIS ORDER WAS MANUFACTURED IN ACCORDANCE WITH CARPENTER SPECIALTY ALLOYS OPERATIONS QUALITY PROGRAM MANUAL, REVISION 31 DATED 09/03/13.

CARPENTER'S QUALITY MANAGEMENT SYSTEM WAS REGISTERED AS OF NOVEMBER 24, 2010 TO THE REQUIREMENTS OF ISO 9001:2008 APPROVAL CERTIFICATE 10-1385R BY PERFORMANCE REVIEW INSTITUTE. THIS CERTIFICATE OF TEST IS TYPE 3.1 PREPARED IN ACCORDANCE WITH EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS, AS DOCUMENTED IN THIS CERTIFICATE OF TESTS.

TEST METHODS ARE PER THE ASTM STANDARDS ON FILE AND IN EFFECT AT TIME OF ORDER ACCEPTANCE, STANDARD PRACTICES, OR AS AGREED UPON BETWEEN CARPENTER & CUSTOMER.

TIMOTHY DUVAL
QUALITY ASSURANCE REP.
CARPENTER TECHNOLOGY CORPORATION

Timothy M. Duval

This certification is made to the customer printed on this form. Carpenter neither makes, nor assumes responsibility for, any representation or certification to other parties.
Die vorliegende Zertifizierung ist nur für den in diesem Formular genannten Kunden gültig. Carpenter übernimmt gegenüber Dritten keinerlei Haftung für die ausgetragenen Daten oder Zertifizierungen.
Ce certificat est uniquement valable pour le client dont le nom est imprimé sur ce formulaire. Carpenter n'assume pas de responsabilité pour une certification vis-à-vis d'une tierce personne.



Castle Metals®

A. M. Castle & Co.

BORDEREAU DE MARCHANDISES
CERTIFICAT DE CONFORMITE

Page 1 of 2


No de Formulaire d'Emballage / Shipment No:2251904

Expédié de / Ship From: MONTREAL - CASTLE METALS 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Vendu à / Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	Expédié à / Ship To: METCOR INC. 560 BOUL. ARTHUR-SAUVE SAINT-EUSTACHE, QC J7R 5A8 CA	Livré à / Deliver To: METCOR INC. 560 BOUL. ARTHUR-SAUVE SAINT-EUSTACHE, QC J7R 5A8 CA
Date d'expédition / Date Shipped 22-JUL-2014	F.O.B. ORIGIN	Modalités de transport / Freight Terms Prepaid	Transporteur / Carrier LOCAL_FLEET	No du Bon de connaissance / BOL No 2251904-3

Détails d'expédition / Shipment Details Destination finale / Final Destination Branch - MON

N° de commande / Order No 3446712	N° de ligne / Line No 1	N° d'article / Item No 14961.MO	Description 0.5000.RD.17CR-4NI.STAINLESS.CF.SOL TR.COND A.144.0000 CUT TO 145.5 IN () - CUT IN 4TH'S SPECIFICATIONS: AMS 5643
N° de bon de commande / Purchase Order No 24969	Nbre de pièces / Part Number	Qté commandée / Ordered Qty 10.00 PCS	Qté Facturée / Invoice Qty 121.2500 FT

Détails / Details ATTN MONTREAL: SHIP TO METCOR AMS 5643 ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS			
---	--	--	--

N° de livraison / Delivery No : 119717955	Usine / Mill	No de coulée / Heat Number 	Code mec / Mech Id	Qty or PCS 10	Largeur / Width (IN)	Longueur / Length (IN)	Qté expédiée / Shipped Qty(LBS) 80.9950
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Castle Metals®

A. M. Castle & Co.

**BORDEREAU DE MARCHANDISES
CERTIFICAT DE CONFORMITE**

Page 2 of 2

Ces marchandises/technologies sont sujettes aux règlements de l'Export Administration et du département d'État des États-Unis. Si elles ont été exportées/importées, elles doivent se conformer à ces règlements. Toute modification du contrat de transport contraire aux lois des États-Unis est interdite.	
These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, violate export laws. Any modification to US Law is Prohibited.	
Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel, y compris toute spécification faisant partie de la description. Les rapports d'essai sont archivés pour les besoins de consultation. Toute requête concernant le matériel défectueux sera rejetée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co. dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.	
We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.	
Ce matériel a été reçu et inspecté par Reviewed by Authorized Castle Metals Representative:	Date: _____ Name: _____

Acciaierie Valbruna S.p.A.



CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2004) , 3.1

36100 VICENZA (Italia) - Viale della scienza, 25 z.i.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4

Cliente / Empfänger / Purchaser / Client
VALBRUNA CANADA LTD
8724 HOLTGATE CRESCENT
L5T 5Z1-MILTON, ONT L5T 5Z1-CA

Produttore: **ACCIAIERIE VALBRUNA S.P.A.**
Hersteller / Hersteller / Producer

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER

Avviso di Spedizione: D-VII3037324
Lieferungsanweisung 1010 L

Certificato nr: MEST444355/2013/ 1
Prüfung/Tier/E 100

Conferma ordine nr: E113010030
Werkzettel / Order Confirmation

Marchio di Fabbrica.
Zeichen des Werksachverständigen
Trade mark
Sigle de l'usine productrice



Stato di fornitura: Hot rolled - COND. A Conterless Ground
Lieferzustand/Delivery state/État de livraison

Tipo di Elaborazione: E+ADD
Erschwerungs/Mechanism process/Mode of fabrication

Punzone del Collaudatore:
Stempel des Werksachverständigen
Inspector's stamp/Inspection de l'Attesteur



Specifiche:
Anforderungen / Requirements / Exigences

3174-01 36 630 A
ASME SA564 2013 S17400 A (0)

AMS 2303 F.
ASTM A564 2010 S17400 A

AMS 5643 S S17400 A

(0) SECTION II PT.A 2013 EDITION

Qualità: 630
Werkstoff/Grade/Qualité

Marca: V174
Markenname / Brand / Marque

Tolleranza: ASTM A484-11 TABLE 7
Toleranz / Allowance / Tolerances

Punzonatura: 630
Kettenschnur/Marking/Markage

Pos. nr. Item nr. Nr. de poste	Objetto Object Produit description	Dimensioni - In Abmessungen Dimensions Diametro	Lunghezza - In Länge Length Longueur	Colata Schmelze Heat Casting	Pezzi Stückzahl Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Batch Lot nr. Lot nr.
0010	Round	5,000	144 / 148	261341		1.559	314906470

TEST ALLO STATO DI FORNITURA

Test on delivery condition Prüfung auf Lieferzustand Prüfung auf Zustand des Materials Prüfungsbedingungen

TEST	Provetta/Probes Brennstoff probe 1 kg 1 lb 1000 g 1 kg 1 lb 1000 g 1 kg 1 lb 1000 g	°F	Test Type Type	Snervamento Tensile Tensile Rp 0,2% k.s.l.	Snervamento Tensile Tensile Rp 0,2% k.s.l.	Resistenza Tensile strength Tensile strength Rm k.s.l.	Allungamento Elongation Elongation E 4d %	Stirazione Reduction of area Reduction of area RA %	Resistenza Tensile strength Tensile strength Rm k.s.l.	Durezza Hardness Hardness HB
	Valori richiesti / Anforderungen Requirements Valeurs demandées	min max				175				363
A	12,5	154	L	134		162	9	47		345

TEST	min	max
B Della Ferrite	5,0	1,0 %
B RATINGS FREQUENCY	1,10	0
B RATINGS SEVERITY	1,05	0

Sample cond. H900

Sample cond. H900											
Tipo Trattamento Wärmebehandlung Heat Treatment Traitement Thermique	Temperatura Temperatur Temperature Température	Raffreddamento Abkühlung Cooling Refroidissement	Permanenza Haltezeit Holding Maintien	Tipo Trattamento Wärmebehandlung Heat Treatment Traitement Thermique	Temperatura Temperatur Temperature Température	Raffreddamento Abkühlung Cooling Refroidissement	Permanenza Haltezeit Holding Maintien	Tipo Trattamento Wärmebehandlung Heat Treatment Traitement Thermique	Temperatura Temperatur Temperature Température	Raffreddamento Abkühlung Cooling Refroidissement	Permanenza Haltezeit Holding Maintien
Agire	900 °F	AIR	60								
TEST	Provetta/Probes Brennstoff probe 1 kg 1 lb 1000 g 1 kg 1 lb 1000 g 1 kg 1 lb 1000 g 1 kg 1 lb 1000 g	°F	Snervamento Tensile Tensile Rp 0,2% k.s.l.	Snervamento Tensile Tensile Rp 0,2% k.s.l.	Resistenza Tensile strength Tensile strength Rm k.s.l.	Allungamento Elongation Elongation E 4d %	Stirazione Reduction of area Reduction of area RA %	Resistenza Tensile strength Tensile strength Rm k.s.l.	Durezza Hardness Hardness HB		
	Valori richiesti 1 Anforderungen Requirements Valeurs demandées	min max	170	-	190	-	40	-	388 444		
B	12.5	68 L	190		205	18	61		430		

(L)-longitudinale/long, T-transversale/quer, Q-Tangentiale/tangentiel

Mechanical properties according to ASTM A370.
Della Ferrite according to AMS 2315.

Vicenza, 07/03/14
H000000
(Mod. MCE2)

Il collaudatore di stabilimento / der Werksachverständiger / Works inspector / L'agent d'usine

M. Rizzoli

Pagina - 1 di 2

Acciaierie Valbruna S.p.A.



CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2004) , 3.1

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4
Clienti / Bezieher/Kunden/Clients
VALBRUNA CANADA LTD
8724 HOLGATE CRESCENT
L5T 5Z1-MILTON, ONT L5T 5Z1-CA
Produttore: **ACCIAIERIE VALBRUNA S.P.A.**
Hersteller/Usine producer

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER

Avviso di Spedizione: D-VI13037324
Lieferantenpacking level L

Certificato nr: MEST444355/2013/ 1
Prüfung/Test/size

Conferma ordine nr: E113010030
Werk/Our Order/Nr

Ordine nr: 311004512 Stock - Canada
Bestell/Your order/Commande

Marchio di Fabbrica:
Zeichen des Werks/Mark
Trade mark
Sigla der Usine producer



Stato di fornitura: Hot rolled - COND. A Centerless Ground
Lieferzustand/Delivery state/Etat de livraison

Tipo di Elaborazione: E+AOD
Erweiterungs/Working process/Mode of elaboration

Punzone del Collaudatore:
Stempel des Werksachverständigen
Inspector's stamp/Preparé de l'essayeur



Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Colata max Schmelze/Guss	min max 0,070	1,00	1,00	15,00 17,50	0,50	3,00 5,00	3,00 5,00	0,040	0,030						
C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	P %	S %	Ta %						
261341	0,044	0,43	0,47	15,12	0,15	3,23	4,58	0,025	0,001	0,0001					

Colata max Schmelze/Guss	min 5°C max 0,450	0,150 0,450													
Cb(Nb)%		Nb%+Ta%													
261341	0,274	0,274													

Reduction ratio > 3 : 1

Macroetch test per ASTM E340: acceptable.

Furnace calibrated according to AMS-H-6875; APRIL 2006

Material solution annealed 1904F for 1 h.

air cooled to below 90F.

Material is DFARS Compliant

Handwritten signature and date: 14/08/05

Sono state soddisfatte tutte le condizioni richieste
Die gestellten Anforderungen sind erfüllt
The material has been furnished in accordance with the requirements
Le matériel a été fourni conforme aux exigences

Controllo antimescolanza OK
Verunreinigung, Spurenanalyse durchgeführt
Anreinigung ist durchgeführt OK
Contrôle antimeslange OK

Controllo visivo e dimensionale: soddisfa le esigenze
Besichtigung und Ausmessung, ohne Beanstandung
Visual inspection and dimensional checks satisfactory
Contrôle visuel et dimensionnel: satisfaisant

Melted and manufactured in Italy No welding or weld repair Material free from Mercury contamination

We declare that the finished product is checked for radioactive contamination through Ponat System when it leaves the production plant.

The Quality Management System is Certified acc. Pressure Equipment Directive (97/23/EC) Annex 1,3.,4.3 by TÜV and LLOYD'S

Any act of tampering, modification, alteration, counterfeiting and/or falsification and/or any other action which modifies the contents of this test certificate shall constitute a violation of applicable civil and criminal laws. Acciaierie Valbruna shall protect its rights and interests before any competent court, authority and jurisdiction.

The supplied product conforms to requirements expressly requested by the purchaser and conforms to requirements specified by certified norms and standards. Should the product be used for more severe, critical and/or in any case different applications than those the material is generally intended for, any different and/or supplementary requirements shall be specifically demanded, at least, upon order of the Product by the Purchaser. Acciaierie Valbruna SpA shall not be responsible for any improper use of the Products.

Vicenza, 07/03/14
V30000
(Mod. MCE3)

Il collaudatore di stabilimento / der Werkssachverständiger / Works Inspector / L'agent d'usine
M. Rizzotto

Pagina - 2 di 2



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO24969

Purchase Order Date 7/11/2014

PO Print Date 7/11/2014

Page Number 1 of 4

Order From : VC-MET001
METAUX CASTLE
A.M. CASTLE & CO. (CANADA) INC. - C/O 910720
P.O. BOX 4090 STN A
TORONTO, ON M5W OE9
CA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 514 694 9575

Ship To Contact
Ship To Phone
Ship Via: VENDOR'S TRUCK
Ship Acct:

Buyer
Customer POID
Customer Tax #
Terms
Currency
FOB
Chantal Lavoie
10127-2607
Net 10
CAD
FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	M174PH-H900R0.500	17-4SS H900 ROUND BAR 0.500	7/21/2014 Yes 7/21/2014		120.00	\$8.12	\$973.91

MATERIAL: 17-4 PH COND. H900
AS PER AMS 5643

NOTE:
PLEASE SHIP ALL MATERIAL TO METCOR INC.
560 BOULV. ARTHUR SAUVE
SAINT-EUSTACHE, QC
J7R-5A8
450-473-1884

Line Total: \$973.91

Note:

7/11/2014



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO24969**

Purchase Order Date 7/11/2014

PO Print Date 7/11/2014

Page Number 2 of 4

Order From : VC-MET001
METAUX CASTLE
A.M. CASTLE & CO. (CANADA) INC. - C/O 910720
P.O. BOX 4090 STN A
TORONTO, ON M5W OE9
CA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 514 694 9575

Ship To Contact
Ship To Phone
Ship Via: VENDOR'S TRUCK
Ship Acct:

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 10
Currency CAD
FOB FCA - (Free Carrier)

2	M174PH-H900R0.625	17-4 SS H900 ROUND BAR 0.625	7/21/2014	36.00		\$12.37	\$445.20
			Yes 7/21/2014	f			

MATERIAL: 17-4 PH COND. H900
AS PER AMS 5643

Line Total: \$445.20

3	M174PH-H900R0.750	17-4 SS H900 ROUND BAR 0.750"	7/21/2014	180.00		\$10.40	\$1,872.00
			Yes 7/21/2014	f			

MATERIAL: 17-4 PH COND. H900
AS PER AMS 5643

183,1260

6/17/125

Line Total: \$1,872.00

Note:

7/11/2014



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO24969

Purchase Order Date 7/11/2014

PO Print Date 7/11/2014

Page Number 3 of 4

Order From : VC-MET001
METAUX CASTLE
A.M. CASTLE & CO. (CANADA) INC. - C/O 910720
P.O. BOX 4090 STN A
TORONTO, ON M5W OE9
CA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

514 694 9575

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 10

CAD

FCA - (Free Carrier)

4	M174PH-H900R1.500	17-4SS H900 ROUND BAR 1.500	7/21/2014	120.00	\$21.94	\$2,633.16
			Yes 7/21/2014			

MATERIAL: 17-4 PH COND. H900
AS PER AMS 5643

Line Total: \$2,633.16

5	M174PH-H900R2.000	17-4SS H900 ROUND BAR 2.000	7/21/2014	24.00	\$38.28	\$918.73
			Yes 7/21/2014			

MATERIAL: 17-4 PH COND. H900
AS PER AMS 5643

Line Total: \$918.73

Note:

7/11/2014



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO24969**

Purchase Order Date 7/11/2014

PO Print Date 7/11/2014

Page Number 4 of 4

Order From : VC-MET001
METAUX CASTLE
A.M. CASTLE & CO. (CANADA) INC. - C/O 910720
P.O. BOX 4090 STN A
TORONTO, ON M5W OE9
CA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 514 694 9575

Ship To Contact
Ship To Phone
Ship Via: VENDOR'S TRUCK
Ship Acct:

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 10
Currency CAD
FOB FCA - (Free Carrier)

6	71401-45	PROCUREMENT QUALITY CLAUSES	7/21/2014	1.00	\$0.00	\$0.00
			No 7/21/2014			

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

Signature
7/11/2014

Line Total: \$0.00

PO Total: \$6,843.00

Handwritten initials

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 1

Change Date: 7/11/2014

Page 1 of 1

All amounts are calculated in domestic currency.

All Item ID/GL/WOs All Rec. Employees All Currencies

[illegible]

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Reçu de livraison

Delivery Receipt

BON DE TRAVAIL Order	EXPÉDITEUR Shipper ID	BON D'EXPÉDITION Shipper
197592	1	83317

EXPÉDITION COMPLÈTE / Shipped Complete

CLIENT /Customer 215

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053



LIVRÉ À /Shipped To

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

COMMANDE DU CLIENT Customer PO	BON DE LIVRAISON DU CLIENT Customer Shipper No.	TYPE DE MATÉRIEL Material Type	DATE DE LA COMMANDE Order Date	TRANSPORTEUR Carrier
24970		17-4PH	2014/7/23	CALL

QUANTITÉ Quantity	No. PIÈCE / Part No.	NOM DE LA PIÈCE / Part Name	DESCRIPTION DE LA PIÈCE Part Description	POIDS Weight
----------------------	-------------------------	--------------------------------	---	-----------------

160 71425-30

(160) RONDE BAR

.500" / .625" / .750" / .1.5" / 2"

CASTLE.PO. 24969

1 366,32

1 PALETTE

TYPE DE CONTENEUR Container Type	# DE CONTENEURS # Of Containers	COMMENTAIRES CONTENEUR Container Comments
PALETTE	1	

CERTIFICAT

EMPAQUETAGE Packing	
------------------------	--

QUANTITÉ EXPÉDIÉE / Quantity Shipped : 160

POIDS EXPÉDIÉ / Weight Shipped : 1 366,32

QUANTITÉ RESTANTE / Quantity Remaining : 0

POIDS RESTANT / Weight Remaining : 0,00

CERTIFICAT

QUANTITÉ EXPÉDIÉE /Quantity Shipped: 160

POIDS EXPÉDIÉ / Weight Shipped : 1 366,32

Signature:

Date:

EXPÉDIÉ LE / Shipped On : 2014/07/29

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
197592	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

COMMANDE DU CLIENT customer po	BON DE LIVRAISON DU CLIENT customer shipper no.	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
24970		17-4PH		
SPÉCIFICATIONS DU PROCÉDÉ processing specifications				
AGE HARDEN CONDITION H 900 SAE AMS-2759/3 REV.E				
EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results	
HARDNESS	40 - 47 HRC	160	44 - 46 HRC	

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
160	1366.32	71425-30 (160) ROUNDE BAR .500" / .625" / .750" / .1.5" / 2" CASTLE.PO. 24969 1 PALETTE

Operation	Temp. spécifiée Specified Temp	Temps de trempe Spécifié Specified Soak Temp	Atmosphère	Carbone Carbon Potential	Q-Media Q-Temp	Four # Furnace #	Date Départ Start Date	Heure d'entrée Time In	Heure de sortie Time Out	Date Complétée Date complete
1.00 CONT. INIT.	LAVAGE		si nécessaire							
2.00 PREPARING	COMPTAGE									
3.00 PREHEAT 1	900°F	0:15 min	air			612				
4.00 AGE HARDE	900 +/-10°F	1 hrs -0 +15 MIN	air			612				
5.00 HARDN INS										
6.00 FINAL INSP							07-29-2014			

COMMENTAIRES / comments

Heat treatment (HT) was performed with equipment that meets the requirements of AMS2759.



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO24970

Purchase Order Date 7/11/2014

PO Print Date 7/11/2014

Page Number 1 of 2

Order From :

METCOR INC.
560 BOUL. ARTHUR SAUVE
SAINT-EUSTACHE, QC J7R 5A8
CA

VC-MET004

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAXED

Contact Name

Vendor Phone 450 473 1884

Ship To Contact

Ship To Phone

Ship Via: TST Overland

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

M/29971

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	71425-30	HEAT TREAT MATERIAL TO H900	8/6/2014		1.00	\$0.00	\$0.00
			Yes		Each		
	17-4 PH ROUND BAR 500"/.625"/.750"/ 1.5"/ 2" SENT FROM METAUX CASTLE P/Q:24969 FINISH: HEAT TREAT TO COND H900 FTY IN EXCESS OF 170KSI FTU IN EXCESS OF 190KSI PER AMS2759/3 DETAIL C OF C REQUIRED PLEASE ADVISE PRICE \$\$\$\$\$\$ FOR LOT		8/6/2014				

P14/7/31

Line Total:

\$0.00

2 71401-45

8/6/2014

1.00

\$0.00

\$0.00

No

8/6/2014

Procurement Quality Clauses

A005 right of entry

A012 chemical and physical test report

A020 non-destructive test/inspection identification

A021 dart aerospace processing

A024 process certifications

A026 certification of material conformance

Note:

7/11/2014



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
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PURCHASE ORDER

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Purchase Order Date 7/11/2014

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Page Number 2 of 2

Order From :

VC-MET004

Ship To : DART AEROSPACE LTD

METCOR INC.
560 BOUL. ARTHUR SAUVE
SAINT-EUSTACHE, QC J7R 5A8
CA

1270 ABERDEEN
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Contact Name

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CAD

FOB

FCA - (Free Carrier)

Line Total: \$0.00

PO Total: \$0.00

U CL

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr:

1

Change Date:

7/11/2014